AGENDA ITEM E-11

CITY OF LODI
COUNCIL COMMUNICATION

AGENDA TITLE: Adopt Resolution Amending Traffic Resolution **97-148 by** Approving a Reduction **of** Speed Limit on Lower Sacramento Road from South City Limits to **1,300** Feet South **of** Kettleman Lane from **55** Miles per Hour **to *50*** Miles per Hour

MEETING DATE: August **1,2007**

PREPARED **BY:** Public Works Director

RECOMMENDED ACTION: Adopt a resolution amending Traffic Resolution **97-148** by approving a reduction of the speed limit on Lower Sacramento Road from the south City limits to 1,300 feet south of Kettleman Lane from 55 miles per hour (mph) to 50 mph, as shown on the attached Engineering and Traffic Survey (Exhibit A).

BACKGROUND INFORMATION: Per the California Vehicle Code (CVC), Engineering and Traffic Surveys must be updated a minimum of every five years on all "non-local" streets. "Non-local" streets are collector and arterial streets included in the Federal Aid System. Streets with surveys that have exceeded five years cannot be radar enforced. The Police Department relies on these surveys not only for speed enforcement purposes, but for use in the courtroom in the event of a dispute from the person cited. The establishment of speed limits is also coordinated with the Police Department due to their field and enforcement expertise.

In accordance with CVC Section 40802 (b), Engineering and Traffic Surveys are performed following the California Manual on Uniform Traffic Control Devices (MUTCD). The important factors to consider in determining the speed limit, which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are:

Prevailing Speeds (85th Percentile Speeds) – Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the nearest 5 mph increment to the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment may indicate the need for a further reduction of 5 mph.

Accidents – Accident records for the two most recent years are considered in determining speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACCIMVM). The average Citywide accident rate is 3.3 ACC/MVM.

APPROVED: /
Blair King, City Manager

Unexpected Conditions – Highway, traffic, and roadside conditions not readily apparent to the driver are also considered. When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile may be justified

In addition to the three primary factors described above, the following characteristics are also considered:

- Residential density
- Pedestrian and bicycle safety
- Roadway design speed
- Safe stopping sight distance
- Superelevation
- Shoulder conditions
- Profile condition
- Intersection spacing and offsets
- Commercial driveway characteristics
- Pedestrian traffic in the roadway without sidewalks

DISCUSSION/RECOMMENDATION: The entire length of Lower Sacramento Road within the City limits was recently studied. The only recommended speed limit change on Lower Sacramento Road is on the portion between Harney Lane and Kettleman Lane that was recently added to the City with the Southwest Gateway Annexation. This portion of roadway, as well as the portion south of Harney Lane within San Joaquin County, has a prima facia speed limit of 55 mph. Although the vehicles speeds recorded and low accident rate support a 55 mph speed limit, because the roadway has bike lanes and lacks sidewalks for pedestrians, we recommend a speed limit reduction. Based on these factors, we recommend City Council approve a 50 mph speed limit on the portion of Lower Sacramento Road from the south City limits (Harney Lane) to 1,300 feet south of Kettleman Lane, as shown on Exhibit A. The speed limit on all other portions of Lower Sacramento Road will remain unchanged. A map showing speed limits in the City is attached as Exhibit B.

FISCAL IMPACT: Not applicable

FUNDING AVAILABLE: Funding for installation of speed limit signs and pavement legends will come from the Measure **K** funds at an approximate cost of $3,430.

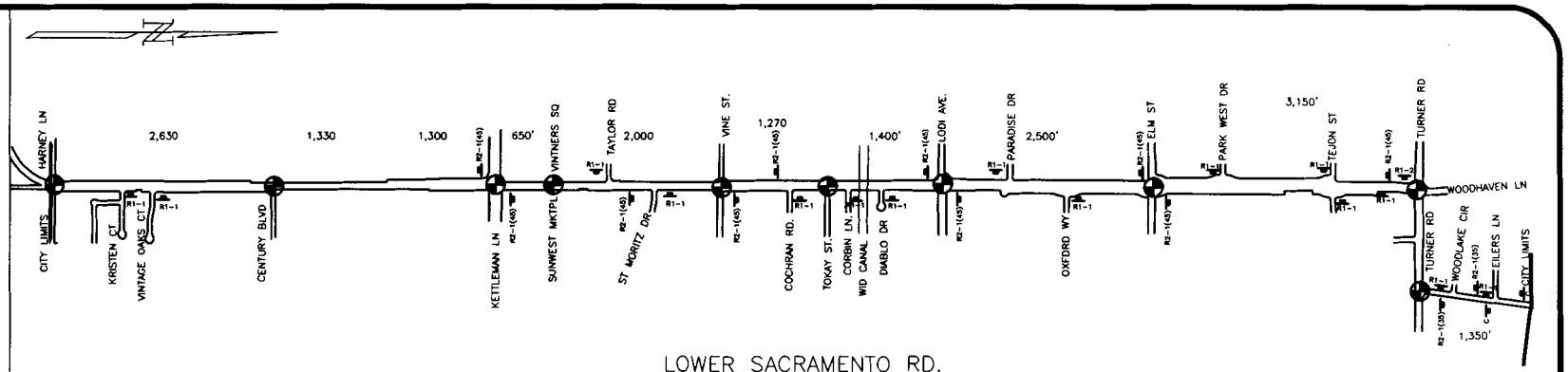
Kirk Evans, Budget Manager

Richard C. Prima, Jr.
Public Works Director

Prepared **by** Rick S. Kiriu, Senior Engineering Technician
RCP/RSK/pmf
Attachments
cc: City Attorney
Senior Traffic Engineer
Streets and Drainage Manager
Police Sergeant Carillo
Police Chief
Management Analyst Areida
City Engineer/Deputy Public Works Director

ENGINEERING AND TRAFFIC SURVEY

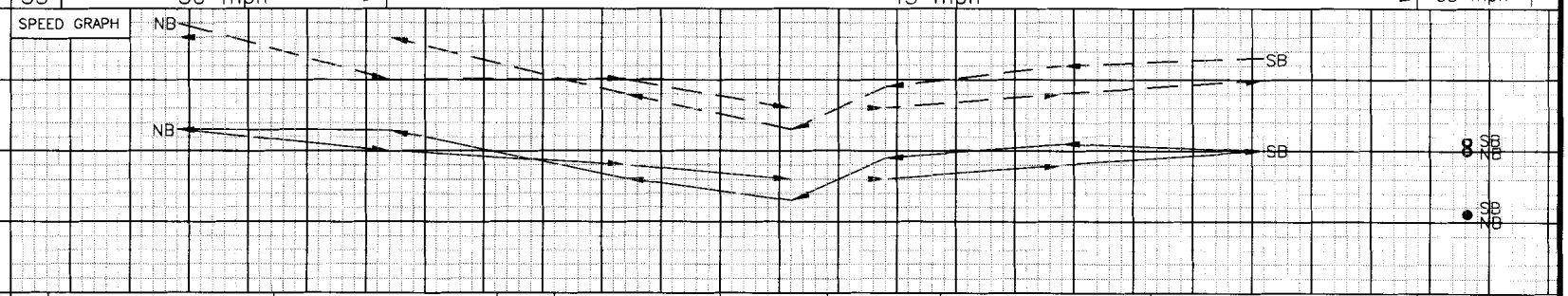
SEE NARRATIVE FOR BACKGROUND INFORMATION



SPEED TABLE		1/2 MILE	1/2 MILE	1/2 MILE	1/2 MILE	1/2 MILE	1/2 MILE	
ROADWAY WIDTH		75' ← 89' → 85'	77'	77'–106'	← 82'–100' →	90'	82'–86'	← 90'–110' → ← 85'–90' → 46'
NO. OF LANES		4	← 4w/bike lane →					2w/bike lane
MEDIAN (TYPE)		← Raised Concrete →						None
TRAFFIC SIGNAL DATA		8ø Act	6ø Act	8ø Act	6ø Act	6ø Act	8ø Act	8ø Act 8ø Act(west) 6ø Act(east)
AVERAGE DAILY TRAFFIC		14,930		15,130 (17,390) (19,655)	24,185	25,270	22,500	17,900 16,450 10,260
OBS. SPEED–CRITICAL,85th%	NB	58	50		50	46	46	48 50 40
	SB	56	56		48	43	49	52 53 41
–PACE(%)	NB	43–53(63)	40–50(72)		38–48(72)	36–46(74)	36–46(71)	38–48(71) 40–50(71) 31–41(80)
	SB	43–53(66)	43–53(71)		36–46(73)	33–43(74)	39–49(71)	41–51(67) 40–50(68) 31–41(78)
–MEDIAN,50th%	NB	50	46		44	41	41	43 45 36
	SB	51	50		42	39	44	47 47 36
EXISTING SPEED ZONE		55 mph prima facia			← 45 mph →			35 mph
PROPOSED SPEED ZONE		55 ← 50 mph →			← 45 mph →			35 mph

LEGEND:

- –SIGN LOCATION
- R1–1 –STOP SIGN
- R2–1( ) –SPEED LIMIT SIGN (MPH)
- R1–2 –YIELD SIGN
- C –ASSEMBLY C (SCHOOL 25 MPH SIGN)
- W1–X –CURVE WARNING SIGN
- W13–1( ) –CURVE ADVISORY SPEED
- –TRAFFIC SIGNAL
- –CITY LIMIT
- –CRITICAL SPEED
- –LOWER LIMIT OF PACE



ACCIDENT PLOT	YR: 2005	0	11	11	1 11 1	1	1 1 1	0	1	11
	YR: 2006	11	1 1 1	1	1111 1 11	1 1	1 11	1	1 11 1	1
ACCIDENT RATE–ACC./MILL. VEH.–MI.		0.4	0.9	1.7	1.6	0.6	1.4	0.2	0.7	1.6

DR: RSK	No.	Date	Revision	Appr
CH:	1	0/04	Opened west leg @ Sunwest Mkt	
DATE: MAY 2007				

Approved By

Senior Traffic Engineer TR 1625 Date

CITY OF LODI
PUBLIC WORKS DEPARTMENT

LOWER SACRAMENTO RD.
S. City Limits to N. City Limits.

SPEED ZONE SURVEY

EXHIBIT A

June 2007

SPEED ZONE REPORT - Lower Sacramento Road, South City Limits to North City Limits

- REFERENCE - Speed zone surveys are performed in the City of Lodi following the California MUTCD in accordance with Section 40802 (b) of the California Vehicle Code.

- STUDY CRITERIA - Important factors to consider in determining the speed limit which is most appropriate to facilitate the orderly movement of traffic and that is reasonably safe are:

  Prevailing Speeds (85th Percentile Speeds) – Reasonable speed limits conform to the actual behavior of the majority of motorists, and by measuring motorists' speeds, one will be able to select a speed limit that is both reasonable and effective. Speed limits should normally be established at the nearest five mile per hour (mph) increment to the 85th percentile speed. However, in matching existing conditions with the traffic safety needs of the community, engineering judgment may indicate the need for a further reduction of five mph.

  Accidents – Accident records for two recent years were considered in determining the speed zones. Accidents on segments of roadways are classified by their accident rate. Accident rates are determined by the number of accidents occurring within a segment of roadway and the traffic volume within that segment. Accident rates are shown in accidents per million vehicle miles (ACC/MVM). The average Citywide accident rate is 3.3 ACC/MVM.

  Unexpected Conditions – Highway, traffic, and roadside conditions not readily apparent to the driver were considered. When roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers, speed limits below the 85th percentile may be justified.

  Other Factors – The following factors were considered: residential density, pedestrian and bicycle safety, roadway design speed, safe stopping sight distance, superelevation, shoulder conditions, profile condition, intersection spacing and offsets, commercial driveway characteristics and pedestrian traffic in the roadway without sidewalks.

- STUDY RESULTS

  Sixteen radar surveys were performed and the 85th percentile speeds ranged from 40 to 58 mph as shown below:

Street Segment	Northbound	Southbound
South City Limits to Century Boulevard	58 mph	56 mph
Century Boulevard to Kettleman Lane	50 mph	56 mph
Kettleman Lane to Vine Street	50 mph	48 mph
Vine Street to Tokay Street	46 mph	43 mph
Tokay Street to Lodi Avenue	46 mph	49 mph
Lodi Avenue to Elm Street	48 mph	52 mph
Elm Street to Turner Road	50 mph	53 mph
Turner Road to North City Limits	40 mph	41 mph

South City Limits to Century Boulevard

The 85th percentile speeds on this segment are 56 and 58 mph. The 50th percentile speeds are 50 and 51 mph. This segment was recently acquired from the County with the Southwest Gateway Annexation. The current speed limit on this portion of roadway is a prima facia limit of 55 mph. The accident rate of 0.4 is below the Citywide average. No previous accident rate information was available. Based solely on the 85th percentile speeds, the speed limit could be posted at 55 mph; however, due to the lack of sidewalks for pedestrians and bicycle safety, we recommend a 50 mph speed limit along this segment.

Century Boulevard to Kettleman Lane

The 85th percentile speeds on this segment are 50 and 56 mph. The 50th percentile speeds are 46 and 50 mph. The accident rate of 0.9 is below the Citywide average. No previous accident rate information was available as the southern half of this segment was recently acquired from the County with the Southwest Gateway Annexation. The southern portion is rural in nature and has a current prima facia speed limit of 55. The northern half of this segment has a current posted and design speed of 45 mph due to the existing retail development on the east side of the roadway. Based solely on the 85th percentile speeds, the speed limit could be posted 50 mph; however, due to the 45 mph design speed, commercial driveway spacing, and bicycle safety, we recommend retaining the 45 mph speed limit along the northern half of this segment. Based on 85th percentile speeds and rural nature, a 50 mph speed limit is recommended on the south half of this segment.

Kettleman Lane to Vine Street

This portion of Lower Sacramento Road is comprised of two segments. Only the segment between Vintner's Square/Sunwest Market Place and Vine Street was long enough to survey vehicle speeds. The 85th percentile speeds on this segment are 48 and 50 mph. The 50th percentile speeds are 42 and 44 mph. The highest accident rate of 1.7 on these segments is below the Citywide average and lower than the 2.5 rate from the 2003 survey. Based solely on 85th percentile speeds, the speed limit on this segment could be posted at 50 mph; however, based on the reduced accident rate at the current speed limit, pedestrian and bicycle safety, we recommend retaining the 45 mph speed limit along this segment.

Vine Street to Tokay Street

The 85th percentile speeds on this segment are 43 and 46 mph. The 50th percentile speeds are 39 and 41 mph. The accident rate of 0.2 on this segment is below the Citywide average and lower than the 1.3 rate from the 2003 survey. Based on the 85th percentile speeds, continuing low accident rate at the current speed limit, and bicycle safety, we recommend retaining the 45 mph speed limit along this segment.

Tokay Street to Lodi Avenue

The 85th percentile speeds on this segment are 46 and 49 mph. The 50th percentile speeds are 41 and 44 mph. The accident rate of 0.9 on this segment is below the Citywide average and lower than the 1.4 rate from the 2003 survey. Based on the 85th percentile speeds, continuing low accident rate at the current speed limit, and bicycle safety, we recommend retaining the 45 mph speed limit along this segment.

Lodi Avenue to Elm Street

The 85th percentile speeds on this segment are 48 and 52 mph. The 50th percentile speeds are 43 and 47 mph. The accident rate of 0.3 on this segment is below the Citywide average and slightly lower than the 0.4 rate from the 2003 survey. Based solely on the 85th percentile speeds, the speed limit could be posted at 50 mph; however, based on the continuing low accident rate at the current speed limit, and bicycle safety, we recommend retaining the 45 mph speed limit along this segment.

Elm Street to Turner Road

The 85th percentile speeds on this segment are 50 and 53 mph. The 50th percentile speeds are 45 and 47 mph. The accident rate of 0.3 on this segment is below the Citywide average and slightly lower than the 0.4 rate from the 2003 survey. Based solely on 85th percentile speeds, the speed limit could be posted at 50 mph; however, based on the continuing low accident rate at the current speed limit and bicycle safety, we recommend retaining the speed limit 45 mph along this segment.

Turner Road to North City Limits

The 85th percentile speeds on this segment are 40 and 41 mph. The 50th percentile speed is 36 mph. The accident rate of 1.6 on this segment is below the Citywide average and lower than the 2.7 rate from the 2003 survey. Based solely on 85th percentile speeds, the speed limit on this segment could be posted at 40 mph; however, based on the reduced accident rate at the current speed limit, pedestrian and bicycle safety, we recommend retaining the speed limit of 35 mph along this segment.

° CONCLUSION

The recommended speed limits are shown below:

Segment	Posted Speed Limit
South City Limits to Century Boulevard	50 mph
Century Boulevard to 1,300' South of Kettleman Lane	50 mph
1,300' South of Kettleman Lane to Kettleman Lane	45 mph (no change)
Kettleman Lane to Vine Street	45 mph (no change)
Vine Street to Lodi Avenue	45 mph (no change)
Lodi Avenue to Elm Street	45 mph (no change)
Elm Street to Turner Road	45 mph (no change)
Turner Road to North City Limits	35 mph (no change)

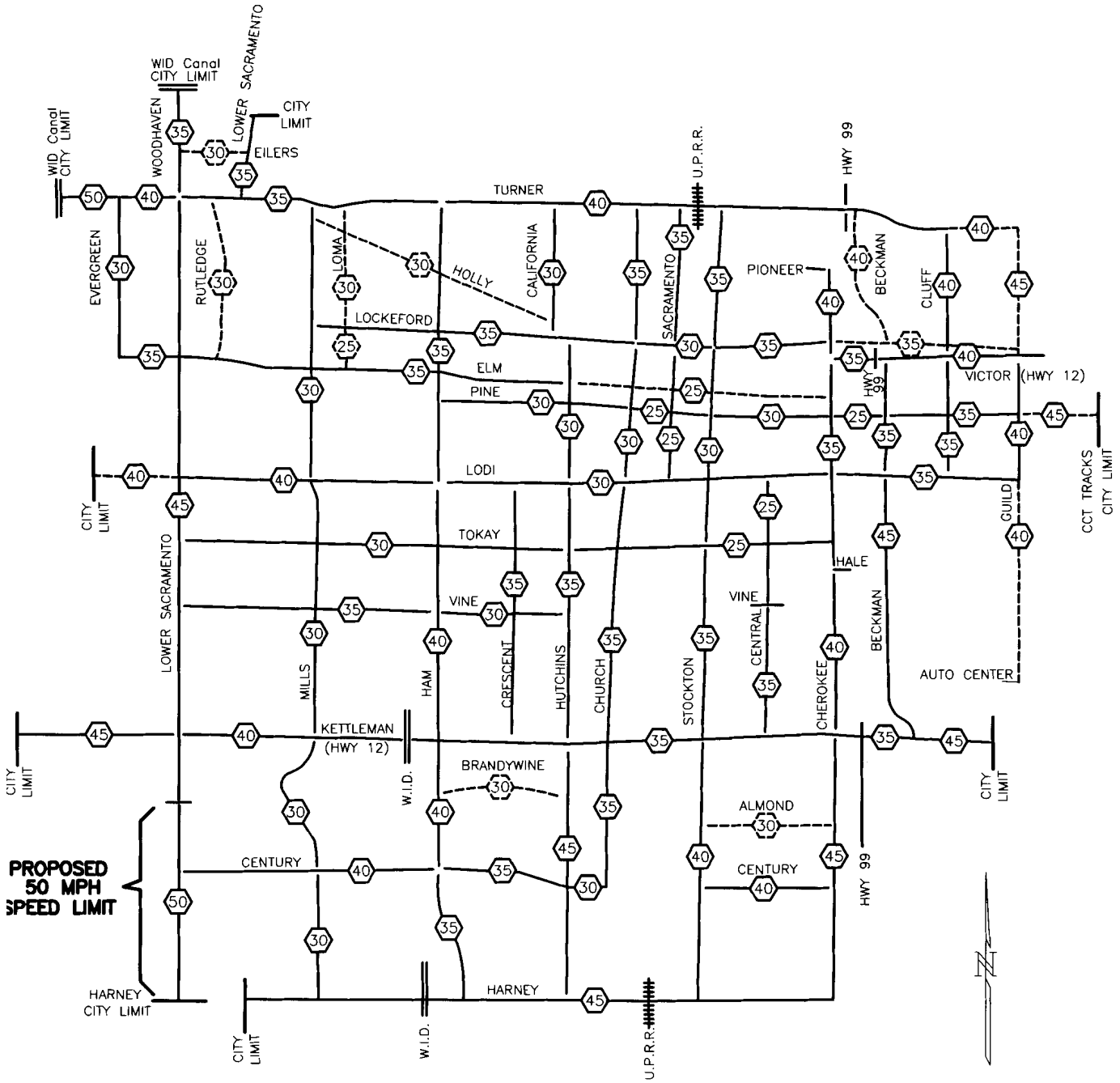
Paula J. Fernandez
Senior Traffic Engineer

EXHIBIT B

CITY OF LODI

PUBLIC WORKS DEPARTMENT

POSTED SPEED LIMITS



NOTE: The speed limits shown on this map are in miles per hour. The speed limit on streets within the City not shown on this map are 25 miles per hour.

LEGEND

- STREET WITH SPEED ZONE (NON-LOCAL STREET)
- "LOCAL" STREET WITH SPEED ZONE (VC 40802)

K:\CADD\TRAFFIC\SPDLIM2007.DWG

RESOLUTION NO. 2007-153

A RESOLUTION OF THE LODI CITY COUNCIL APPROVING A REDUCTION OF THE SPEED LIMIT ON LOWER SACRAMENTO ROAD FROM SOUTH CITY LIMITS TO 1,300 FEET SOUTH OF KETTLEMAN LANE FROM 55 MILES PER HOUR TO 50 MILES PER HOUR AND THEREBY AMENDING TRAFFIC RESOLUTION NO. 97-148

WHEREAS, per §40802(b) of the California Vehicle Code, in order to radar enforce vehicle speeds on this portion of Lower Sacramento Road, a valid Engineering and Traffic Survey must exist; and

WHEREAS, Engineering and Traffic Surveys were performed based upon the State of California Department of Transportation (Caltrans) guidelines; and

WHEREAS, the surveys include a map showing the physical characteristics of the roadway, such as roadway width, number of through lanes, and traffic controls. Traffic volumes, prevailing speeds, and accidents are analyzed and the results are provided in a written narrative for each street; and

WHEREAS, three factors are considered when determining speed limits. They are as follows: 1) Prevailing Speeds (85th Percentile Speeds): 2) Accidents; and 3) Unexpected Conditions; and

WHEREAS, the portion of Lower Sacramento Road from the south City limits to 1,300 feet south of Kettleman Lane was recently added to the City with the Southwest Gateway Annexation and currently has a prima facia speed limit of 55 miles per hour: and

WHEREAS, the Public Works Department recently performed an Engineering and Traffic Survey on Lower Sacramento Road from the south City limits to 1,300 feet south of Kettleman Lane and recommends approval of the speed limit of 50 miles per hour.

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council hereby approves a reduction of the speed limit on Lower Sacramento Road from the south City limits to 1,300 feet south ~~of Kettleman Lane from 55 miles~~ per ~~hour to 50 miles per hour; and~~

BE IT FURTHER RESOLVED that the City of Lodi Traffic Resolution No. 97-148, Section 7, "Speed Limits," is hereby amended by designating the 50 mile per hour speed limit on Lower Sacramento Road from the south City limits to 1,300 feet south of Kettleman Lane.

Dated: August 1,2007

I hereby certify that Resolution No. 2007-153 was passed and adopted by the City Council of the City of Lodi in a regular meeting held August 1,2007, by the following vote:

AYES:	COUNCIL MEMBERS –	Hansen, Hitchcock, Katzakian, Mounce, and Mayor Johnson
NOES:	COUNCIL MEMBERS –	None
ABSENT	COUNCIL MEMBERS –	None
ABSTAIN:	COUNCIL MEMBERS –	None

RANDI JOHL
City Clerk